PART III. MANAGEMENT OF BEARS AND TECHNIQUES

Paper 16

Managing Montana's Grizzlies for the Grizzlies!

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The grizzly bear, *Ursus arctos horribilis*, evokes varied reactions in different people, and various values are embodied in this species. It may be viewed as a symbol of a heritage of adventure and freedom; something to be maintained at maximum densities compatible with good forestry practices and recreation, but with optimal annual harvests; a part of the western mountain wilderness concept; a coveted big game trophy; a species that cannot be maintained at former densities; one that is in conflict with human expansion; a potential threat to life; and many other intensely personal images.

National publicity on grizzly bears in Yellowstone National Park since 1968, has resulted in a general doomsday image for this species. Conflicting views of its population status and of management programs within the Park have greatly influenced management of bears in the adjacent areas of Montana, Idaho and Wyoming, as well as of the distinctly separated (and probably larger) grizzly populations in northwestern Montana. While several questions are involved in the management controversy, the basic issue concerns population size. At present, an open conflict exists between scientific information and the view of certain protectionist groups. Strong evidence indicates that the management (and preservation) of grizzly bear populations in Montana is in jeopardy because of the concerted efforts of groups advocating federal laws to eliminate hunting of the species. Decisions pending at the national level could directly affect all grizzlies in the lower 48 states.

In an attempt to clarify the issues, this paper summarizes the present management and control programs, the known mortality data, and the general biological information available on grizzly populations in the various eco-units of Montana, with references to the programs of Yellowstone National Park and the adjacent states of Idaho and Wyoming.

Various concurrent studies are underway in the Yellowstone area, and an extended and intensive program has been initiated for grizzlies in northwestern Montana. Hopefully, better guidelines for management, and reduced kill of bears through control actions will result.

Programs to live-trap and translocate nuisance grizzly bears and orphaned cubs, and to evaluate a 'bear proof' fence for the sanitary landfill dump near West Yellowstone, Montana, are also presented.

METHODS

The age of bears was established by examining decalcified saggital root sections for cementum annulations, supplemented by skeletal features and suture closure. Tagging programs in Yellowstone National Park and by the Montana

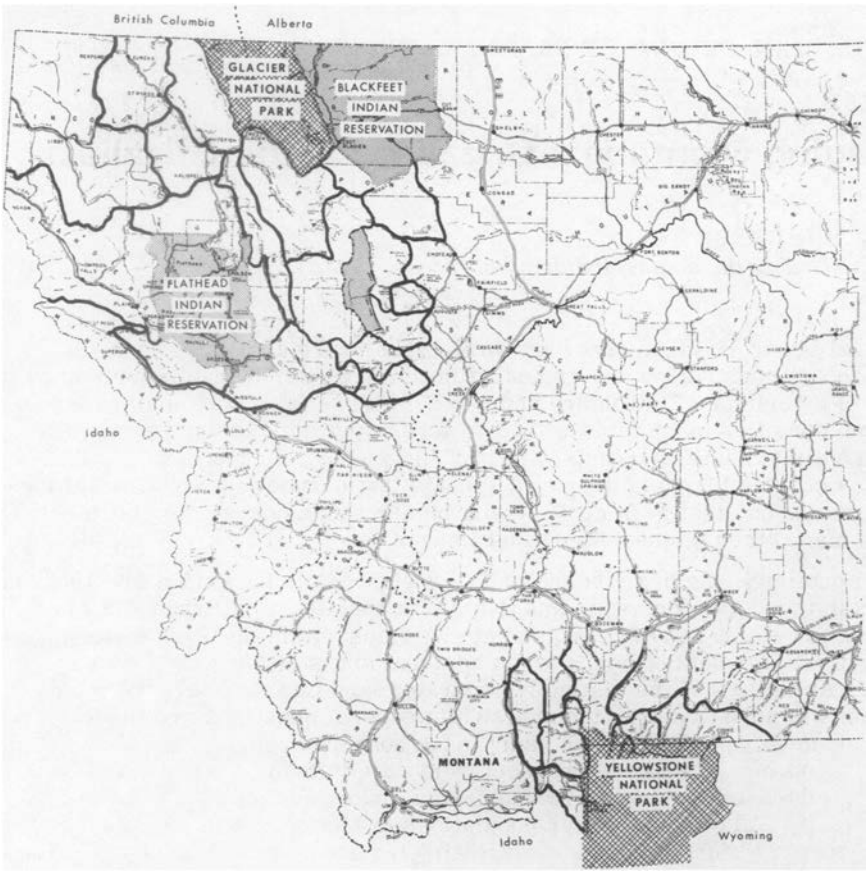

Figure 1. Administrative areas in the northern and southern grizzly bear populations of Montana.

Cooperative Wildlife Research Unit provided known or assigned ages for some bears (Craighead *et al.* 1974).

All data and analyses were separated into two main categories. Until grizzly bear populations and associated eco-units in Montana are further defined, the two units are construed generally in this report as follows: 1) the northern grizzly populations—including the Bob Marshall and Scapegoat wilderness areas, the Sun River Game Preserve, the Mission Mountains, all drainages of the Flathead River, the Flathead and Blackfeet Indian reservations, and the Cabinet Mountains; and 2) the southern grizzly populations-areas of Montana adjacent to Yellowstone National Park (Fig. 1).

In the exclosure study of a land fill dump, a municipal fence was constructed of 3-m chain-link mesh attached to pipe uprights and surrounded with electrified barbed wire (Greer 1974). The fence was examined periodically to record bear reactions and entry attempts, and its effectiveness in excluding bears from the garbage under a normal maintenance plan was evaluated.

Nuisance bears were trapped and moved and orphaned cubs were held and then moved to measure the effectiveness of this management technique compared to the killing of problem bears.

TABLE 1. ANNUAL KNOWN MORTALITY OR OTHER LOSS OF GRIZZLY BEARS FROM MONTANA AND GRIZZLIES PROCESSED FOR THE ADJACENT NATIONAL PARKS.

	1967	1968	1969	1970	1971	1972	1973	7-Year Total	7-Year Avg.
NON-HUNTING									
Illegal	7	4	4	9	6	7	4		
Marauders	4	3	1	4	6	5	2		
Nuisance	0	0	0	1	7	1	1		
U.S. Fish and Wildlife Serv.	2	3	4	2	2	3	0		
Blackfeet Ind. Res.	4	6	3	0	3	1	3		
Flathead Ind. Res.	0	0	3	0	0	0	1		
Live Cubs of the Year	0	0	0	0	0	3	0		
Total Non-Hunting	17	16	15	16	24[b]	20	11	119	17
Total Hunting[a]	24	12	33	13	22	14	15	133	19
Total Mortality	41	28	48	29	46	34	26	252	36
Percent Hunting	59	43	69	45	49	41	58	—	53
Glacier National Park	4	2	3	1	0	0	1		
Yellowstone National Park	6	12	11	16	7	9	0		
Total in Parks[c]	10	14	14	17	7	9	1		

a All hunting seasons are fall only.
b 2 illegal mortalities verified March 1974; changed this total of previously reported 22 to 24.
c Specimens received at the wildlife lab.

DISCUSSION

Surveys conducted since 1947 provide records useful for estimating the annual number of grizzly bear kills. The estimates range from 10 to 60 (mean 37) grizzlies between 1947-1966 (Greer 1970). Since 1967, a special grizzly bear license system has provided a more detailed annual record of the known grizzly bear kill in Montana. Deaths are designated as caused by hunting or non-hunting, with several categories in the latter classification. During 1967-73, known grizzly losses ranged from 26 to 48, averaging 36.

Hunting Mortality.

Hunting accounted for an average of 53 percent (range 43-69 percent) (Table 1). Hunters have taken grizzlies in 17 hunting districts (HD) since 1967, but in any one year only 4 to 11 districts have provided grizzlies.

From 59 to 100 percent of the annual hunter harvest for 1967-73 occurred in 12 northwestern Montana hunting districts and 0 to 41 percent in the southern districts, including 5 districts in the Gallatin National Forest (Montana's segment of the Yellowstone grizzly population).

About 57 percent (76 of 133) of the grizzlies killed by hunters during the seven seasons from 1967-73 were taken in HD 150, 280 and 316, which have an early deer, elk and bear season. The early season conventionally opens 15 September and ends in late November; the regular big game hunting season opens with variable dates in mid-October (Greer 1974).

Of these 76 grizzlies 49 were from HD 150, 18 from HD 316 and 9 from HD 280. About 88 percent were taken during the early season, most (53%) in September. Only nine bears were killed during the regular season with no legal kills during the regular season recorded from HD 316.

Non-hunting Mortality.

Other grizzly losses include: 1) illegal kills either by intent or accident: 2) killing of marauders (bears that threaten life or personal property); 3) killing of nuisance bears (repeated visitation to inhabited areas); 4) killing of livestock predators (U.S. Fish and Wildlife Service); 5) killing under treaty rights (Indian Reservations—usually control actions by natives of the Blackfeet and Flathead Indian Reservations); 6) capture of orphaned cubs; 7) transfer to zoos (occasionally an alternative to 1 through 5).

The known non-hunting losses ranged from 11 to 24 grizzlies (mean 17) during 1967-73 and comprised 47 percent (mean) of the total known annual loss. Except for 1971, when a major translocation program of grizzlies was required in the Yellowstone population (Greer 1972), annual non-hunting loss in the southern districts was 20 percent or less, compared to 80 percent in the northern populations.

In the past few years conflicts and confusion have arisen over the annual grizzly mortality in the Yellowstone range. This total includes hunting and non-hunting deaths, and the removal of live grizzlies. When verified by the responsible agencies, they are included in the *"official"* report by designated representatives of Montana, Wyoming, Idaho and Yellowstone National Park. These data are given in Table 2.

Hunting accounted for only 28 percent of the known man-caused grizzly deaths in the total Yellowstone range during the past 4 years. Records for 1967-70

TABLE 2. ANNUAL GRIZZLY MORTALITIES[1] IN THE YELLOWSTONE ECOSYSTEM (YELLOWSTONE NATIONAL PARK; GALLATIN, CUSTER, TARGHEE, SHOSHONE AND TETON NATIONAL FORESTS) DURING 1970-1973.

	National forests								
Year	Gallatin[2] and Custer (Mont.)	Targhee[3] (Idaho)	Targhee (Wyo.)	Shoshone (Wyo.)	Teton (Wyo.)	Total[4] (Wyo.)	Total Forests	Ynp[5]	Total Area
1970	7	7	0	8	4	12	26	20	46
1971	21	5	2	8	2	12	38	7	45
1972	4	5	1	3	3	7	16	9	25
1973	3	4	0	5	2	7	14	1*	15
Total	35	21	3	24	11	38	94	37	131
4-Yr. Avg.	8.8	5.3	0.8	6.0	2.8	9.5	23.5	9.3	32.8
Number and (Percent) Mortality by:									
Hunting	14 (40)	0 (0)	0 (0)	17 (71)	5 (45)	22 (58)	36 (38)	0 (0)	36 (27)
Non-Hunting	21 (60)	21 (100)	3 (100)	7 (29)	6 (55)	16 (42)	58 (62)	37 (100)	95 (73)
Total	35	21	3	24	11	38	94	37	131

[1]Includes all grizzlies removed from various populations (to zoos, road kills, known natural mortalities, illegals, marauders, nuisance, Indian reservations, and hunting).
[2]Source by Kenneth R. Greer, from Montana Department of Fish and Game records.
[3]Source by Frank DeShon, from Idaho Fish and Game Department records.
[4]Source by Larry J. Roop, from Wyoming Game and Fish Department records.
[5]Source by Glen F. Cole (1974), from Yellowstone National Park records.

*Received August 1974—A weathered carcass that was a probable road casualty during 1973.

TABLE 3. TOTAL KNOWN GRIZZLIES KILLED WITH PERCENTAGE OF FEMALES.

	1967		1968		1969		1970		1971		1972		1973		7 Yr. Avg.	
	No.	%F	No.	%F	No.	%F	No.	%F	No.	%F	No.	%F	No.	%F	No.	%F
Hunting	23	35	12	25	33	39	13	54	22	68	14	50	15	60	132	47
Non-hunting	6	17	8	25	8	88	8	63	17	47	16	38	10	30	73	44
Total	29	31	20	25	41	49	21	57	39	59	30	43	25	48	205	46
Glacier National Park	4	100	1	0	3	33	1	100	0	0	0	0	1	100	10	70
Yellowstone National Park	6	50	11	27	11	36	16	69	7	43	9	44	0	0	60	45

TABLE 4. AVERAGE AGE OF KNOWN GRIZZLY BEARS KILLED IN NORTH, SOUTH, AND YELLOWSTONE PARK POPULATIONS.

	1967		1968		1969		1970		1971		1972		1973	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Hunting	–	–	4.8(5)	7.0(2)	8.1(16)	5.0(11)	7.3(6)	7.0(6)	5.7(7)	8.5(14)	5.3(7)	9.4(7)	7.8(6)	6.6(9)
Non-Hunting	10.0(5)[a]	16.0(1)	11.1(6)	6.0(2)	1.8(2)	6.4(8)	9.3(3)	7.0(5)	7.8(8)	8.5(6)	8.4(7)	9.3(4)	6.5(6)	4.7(3)
Total	10.0(5)	16.0(1)	8.3(11)	6.5(4)	7.4(18)	5.6(19)	8.0(9)	7.0(11)	6.8(15)	8.5(20)	6.9(14)	9.4(11)	7.2(12)	6.1(12)
North	--	--	–	--	8.5(15)	5.1(8)	7.0(6)	6.9(8)	3.8(4)	8.0(12)	5.9(12)	9.4(11)	7.1(10)	6.1(11)
South	--	–	--	–	2.0(1)	4.7(3)	10.0(3)	7.3(3)	7.9(11)	9.3(8)	12.5(2)	–(0)	7.5(2)	6.0(1)
Total	–	--	--	--	8.1(16)	5.0(11)	8.0(9)	7.0(11)	6.8(15)	8.5(20)	6.9(14)	9.4(11)	7.2(12)	6.1(12)
Yellowstone National Park	3.5(4)	9.5(2)	8.4(8)	5.8(4)	8.4(7)	12.0(4)	7.1(5)	5.8(11)	18.0(3)	13.3(3)	6.9(5)	11.4(4)	(0)	(0)

[a]Age (sample size)

show that 14 grizzly deaths in the Montana portion of the Yellowstone range resulted from hunting and 8 from non-hunting causes. In the subsequent years of 1971-1973, hunting accounted for 10 of the 28 known deaths in five hunting regions of the Gallatin National Forest. The grizzly bear translocation program, required in the Gallatin National Forest since 1971, led to several non-hunting mortalities that year because of conflicts with livestock grazing allotments in and near transplant sites.

The Idaho Fish and Game Department has not authorized a grizzly bear hunting season since 1946 and, therefore, officially 'protects' the grizzly; however, *official* Idaho Fish and Game Department records recently showed that some grizzly mortalities do occur. In the northern portion of the Targhee National Forest and in the southern portion of the Gallatin National Forest, grizzly mortality has been occurring regularly, with 7, 5, 5 and 4 grizzly mortalities verified during 1970-1973, respectively. Most, if not all, of these losses result from conflicts with sheep ranchers.

The Wyoming Game and Fish Department opened regular grizzly bear hunting seasons in the spring and fall of 1970-1973. Like Montana and Idaho, Wyoming has a significant number of non-hunting grizzly mortalities. An *official* report by the game department indicated that in three national forests (Targhee, Teton and Shoshone) adjacent to Yellowstone Park, only 58 percent of 38 known grizzly losses during 1970-1973 were from hunting (Roop, pers. comm.).

During the same period, Yellowstone National Park *officially* reported that 20, 7, 9 and 10 grizzlies were removed from Wyoming populations inside the Park (Cole 1974).

Sex and Age of Grizzly Bear Mortalities.

Over 95 percent of the grizzlies killed by hunters are taken without considering size, sex or age. Because grizzly bears mature slowly and are irregular in their first or subsequent pregnancies (Craighead *et al.* 1969), females may be a critical component in maintaining numbers. Consequently, close surveillance of female mortality is required to determine the population status of the species.

Although differences occurred in the annual hunting and non-hunting mortality of females, the 7-year averages were nearly identical. Combined, they accounted for 46 percent of the total loss (Table 3). The female mortality by hunting was 25 to 39 percent in 1967-69, and 54 to 68 percent in the following 4 years. Forty-five percent of grizzlies taken in Yellowstone National Park control programs were females.

Consolidating age groups allows comparisons between the two geographic (northern and southern) populations (Table 4). During 1970-73 the average age of all bears ranged from 6.1 to 9.4 years, but males averaged about 1 year older than females in 1970 and 1973, and females averaged about 2 years older than males in 1971 and 1972. In most years, samples of 1-to-3-year-olds are too limited for comparisons between northern and southern populations, but the average ages are not strikingly different for those years of adequate sample size. The average age of grizzlies from Yellowstone National Park—a non-hunted and stable population—is similar to that of the regularly hunted northern populations. If these average ages derived from available samples are considered an approximate representation of the populations, it then appears that age composition has remained uniform.

Complaint-Control-Translocation Programs

Grizzly control has been required since 1967 on the Blackfeet Indian Reservation and since 1971 in the West Yellowstone area.

Conflicts with grizzly bears occurred in as many as seven areas of the state during the past 3 years. Some encounters were resolved immediately when landowners shot the grizzlies. Other bears were reported to Department personnel for live trapping and removal.

In the north, encounters, complaints and control efforts have been made by citizens and Department personnel near Eureka, Polebridge, Big Fork, the Flathead Indian Reservation, Spotted Bear, Choteau, Augusta, Alice Creek, and other settlements. Complaints on the reservations are handled by treaty persons or USFWS personnel. Grizzlies taken by government trappers are forwarded to the Fish and Game Department lab, but grizzly heads from the bears taken by Indians were not available until 1973. With the exception of 1970, from one to six grizzlies were killed on the Reservation in each year from 1967-73.

Grizzly and black bears, *Ursus americanus*, have coinhabited the vicinity of West Yellowstone during spring, summer and fall for many decades. As man's interests and properties have increased, so have complaints about nuisance bears. Community and private garbage dumps in this area were traditional foraging sites for several generations of both species. In most years, an occasional grizzly may appear by late April, but small numbers normally cause no conflict with man. As bear numbers and activities increase during May, June and July, nuisance bears become more numerous, public complaints frequently follow, and control action ensues. The pattern has been repeated from 1971 through 1973. Described below is one study on use of electric fences for bear control. The last open garbage dump at Trout Creek in Yellowstone Park and an open dump near West Yellowstone, Montana, were both eliminated before the 1971 summer season. The West Yellowstone dump was relocated on level ground, and was designed as a bear-proof exclosure including a chain link fence inside an electrified three wire stock fence (Greer 1972). The abrupt relocation resulted in an anticipated increase of grizzly bear complaints. By mid-1971 a control program was required, and a live-trapping program using 230 culvert trap sets and 25 snare sets from 23 June to 22 September, resulted in 23 captures of 19 grizzlies. A few grizzlies continued to visit the dump area during October and November, and one entered the town of West Yellowstone during the first week of November.

During the winter of 1971-72, snow damaged the bear fence around the West Yellowstone dump. Improper construction appeared to be the cause. The fence was reconstructed, but apparently the top edge was not adequately reinforced.

During the second season of operation (1972) it was found that the facility was not completely bear-proof. Bears visited the area throughout the summer, and some entered and exited through the fence at various locations. Although only 3 grizzlies were captured from this area, probably 15 to 25 grizzly bears are involved in over 50 individual entries.

The death of 13 translocated grizzlies (only 3 taken by hunters) during the 1971 management program led us to anticipate fewer troublesome grizzlies around West Yellowstone in 1972. However, live trapping began 23 June, precisely the same date as the previous year, and grizzlies were present during 1972 in the same periods. About 125 culvert trap sets through 15 September resulted in the capture of seven grizzlies. From 5 to 10 additional grizzlies

were also known to be in the vicinity of West Yellowstone (excluding the dump area) for as long as several days during 1972 without causing formal complaints. In total, the trapping effort was about 50 percent less than in 1971, and the number of individual grizzlies captured in 1972 was about 70 percent less than in 1971.

During 1973, minor repairs to the fences of the West Yellowstone dump were again made intermittently but proved insufficient. The fence, although secure at the bottom by being buried 1 m, was attached in only three places at the top to an iron cross bar between uprights. Three strands of barbed wire topped the fence, and three electrified strands were attached to iron posts 0.3 m outside the main fence. This design still did not prevent bears from reaching the disposal pit. Bears were not deterred by the three-stranded electrice fence, and upon reaching the main fence they merely crawled up and over, squeezing between the pipe and wire. At each penetration, the wire fence was severely bent. Bears exited in the same or different locations, as none were ever discovered in the exclosure. During the 1973 season, grizzlies made 11 unsuccessful digging attempts to get under the fence.

As evidenced by track size, a minimum of 13 and possibly as many as 24 grizzlies entered the dump. Others may have visited the area without gaining entry. With this many individual bears visiting the area one or several times from May to November, we can assume the total at perhaps 100 visits. A total of 11 trap sets at the dump captured three adult females, and trap sets in nearby areas caught three grizzlies. One male had been translocated 72 airline km the previous year. Trapping effort during 1973 was about 40 percent less than in 1972 and the capture of seven individuals was the same (Greer 1974a). Prior to the hunting seasons of 1971, 1972 and 1973, 17, 4 and 3 grizzlies, respectively, were translocated into Montana hunting districts north of the Park (Greer 1972; 1974). They were moved a distance of 80-100 km, likely into or near areas with which they were familiar (Fig. 2). The relocation of some bears was shortlived for four bears were re-trapped at the original capture site within 19 to 48 days, and three were re-trapped in the vicinity of West Yellowstone in succeeding years.

In 1971, when 17 bears were moved, 9 were killed by hunters in three of five Montana hunting districts adjacent to Yellowstone Park. Among them were a 5-year-old male which was moved 80 airline km on 23 July from West Yellowstone and was killed 28 November at the head of Sage Creek (HD 310), about 16 m north of initial capture. Of seven grizzlies taken by hunters from HD 316 between 16 September and 4 October, two had been translocated from West Yellowstone, two were unmarked, and three held Park Service tags. In 1972, hunters did not kill any grizzlies in these five hunting districts while in 1973 only one bear, a male tagged in the Park, was killed in HD 316.

CONCLUSIONS

Since 1967, regulated hunting, studies of garbage dump closure, and the documentation of man-caused mortalities have been the basis for management recommendations in Montana. Studies reveal that 26 to 48 grizzlies were killed each year, and that 47 percent of the total were taken for reasons other than hunting. The data further show that the average age of bears killed in hunted areas was comparable to that in non-hunted populations in Yellowstone National Park, and that about 45 percent of the annual losses are subadults of 4 years or younger. Closure of some hunting districts, increased license fees

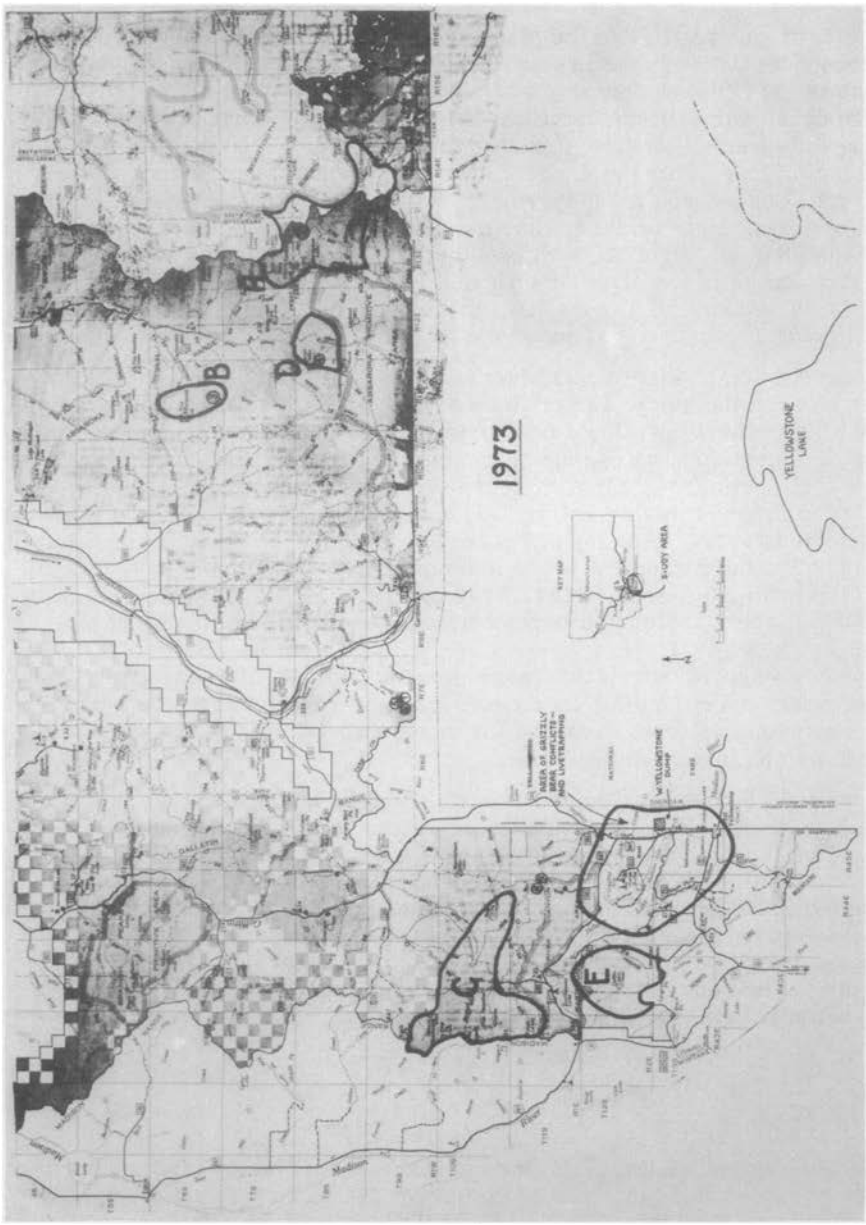

Figure 2. Grizzly bear translocations, and designated areas in the Gallatin National Forest, Montana, during 1973.

and hunting season adjustments can adequately control the rate of the hunter's harvest. With these policies, some grizzly populations appear to be expanding their present range, and the age classes within populations appear to be normal. Although the mortality sample is rather small (20-30) for individual years, it is probably not mere coincidence that the bears killed represent the entire age spectrum in the population.

Apparently, several eco-units of grizzly bears that may form discrete, coexisting or intermingling populations do occur in Montana and provide an annual hunting harvest which is carefully controlled by the State. Other forms of annual mortality are more difficult to curtail.

The major grizzly habitat and populations occur in and adjacent to the Bob Marshall Wilderness area (HD 15). Hunter-killed grizzlies have been well distributed within this one-million-acre area, bears taken ranging from young to old. This area has apparently not experienced a deleterious reduction in resident population numbers or its distribution. Areas adjacent to the South Fork of the Flathead River and the Lincoln-Scapegoat Wilderness Area likewise show no evidence of overharvest. In fact, portions of the population may actually be increasing in a few areas. The various groups of bears should be carefully monitored for changes in their status.

Complaints about grizzly bears around man's dwellings and properties have gradually increased in several locations during the past few years. Only one or two grizzlies were involved in each of 10 areas requiring control action, but a continuous program was necessary, and may be necessary in the future, throughout the range of grizzlies in Montana. The program can be expanded, but, should all hunting cease, considerable additional time and effort may be required. Studies should be made as soon as possible to predict necessary methods and efforts.

The live capture of nuisance grizzly bears introduces the problem of disposal, Relocation within a national forest near the capture site has provided a temporary solution. Some injured or very old individuals are considered poor risks for translocation, and perhaps in the future they should be dispatched. The problem of social impact on resident grizzlies of transplants should be studied further as soon as possible.

In the past 5 years, local and national publicity has amplified the controversy over management of the Yellowstone National Park grizzly population. This controversy, has been extended to other grizzly populations in Montana, Wyoming and Idaho, and several conservation groups have pressed for the reclassification of grizzlies as an endangered species. In their view, further protection will 'save' the species. Their concern, however, is usually restricted to that portion of grizzly mortality which is already under control by licenses, seasons and regulations, while the equally significant non-hunting portion of annual grizzly mortality is generally ignored. With the elimination of legal hunting, it is possible that 'surplus' grizzlies could be involved in incidents and conflicts with man at a greater rate, and many more grizzlies could become casualties, especially in areas where sheep and livestock grazing permits are authorized.

At present, it does not appear that 1,000-2,000 licenses sold annually have significantly affected the rate of harvest; the average hunter success is about 1.5 percent. Grizzly hunting licenses are almost without exception bought as a precaution in case of a grizzly encounter during an elk hunt in areas where both species occur. In fact, a stringent license and quota harvest system for grizzlies could adversely affect grizzly management and, subsequently, the

status of the species. A few possible harmful effects are: (1) a complete loss of the grizzly hunting experience which many persons regard as a cultural and legal right; (2) failure to meet biologically sound quotas; (3) increased encounters between grizzlies and people, resulting in a sudden rise in injuries to people and the non-hunting deaths of bears (of which more may be unreported); and (4) a highly lucrative and illegal traffic in pelts.

Collectively, the *official* reports by the respective state game departments and Yellowstone National Park indicated that 72 percent of the known grizzly mortalities and removals from the Yellowstone area populations were by non-hunting causes during 1970-73. Even when 36 non-hunting mortalities within Yellowstone National Park are deleted, the remaining 94 grizzly losses within the Yellowstone area consist of 38 percent by hunting and 62 percent by non-hunting.

There are strong indications from Idaho that subsequent inquiries and findings will not accurately reveal the number of illegal, marauder or nuisance grizzly mortalities (Frank DeShon, pers. comm.). In subsequent years, lack of verified grizzly deaths in Idaho may not mean none occur, only that they are not reported to agency personnel.

State game departments charged with the control, management and perpetuation of the species must consider the divergent values placed on the grizzly bear, which in turn create serious conflicts. Among management problems are: man's continued intrusion into grizzly range; the conflict of grizzlies with livestock; the economic value of hides to merchants, guides and taxidermists; the population status of the species; role of hunting in grizzly management; size and integrity of grizzly habitats and ranges; recurrent problems at campgrounds, dumps, cabins or other recreational areas, and precautions to be taken to reduce such problems; effects on other populations of controversy and publicity over Yellowstone grizzlies; and differing management approaches taken by State and federal agencies.

The recent move by the Montana Department of Fish and Game to reduce hunting mortalities may stimulate to action those agencies, individuals and organizations which can lessen non-hunting mortalities. For instance, sheep allotments on the Gallatin National Forest in the five hunting regions of Montana have been voluntarily reduced from 18 in 1969 to 11 in 1974, but it is probably unreasonable to expect that *all* public land grazing permits will be eliminated from areas of known grizzly habitation where grizzly hunting has been banned. In the view of the Montana Department of Fish and Game, hunting is not presently jeopardizing the grizzly in Montana. To declare the grizzly an 'endangered' species, thereby eliminating hunting, would in fact be harmful to this species. Although other views are recognized and respected, the State will resist further efforts to ban grizzly hunting. The Fish and Game Commission's grizzly bear policy is, in part, —'to perpetuate and manage this unique wildlife species in suitable habitat of the state for the people of Montana' and in the National interest. Considering the good evidence that substantial populations are present in Montana, hunting seasons and regulations will continue to be based upon sound management and research. With continued effort, any changes in the status of the bears will be recognized and adequate measures will be taken. Continuing studies on grizzlies by the State, in cooperative programs with the U.S. Forest Service, National Part Service, U.S. Fish and Wildlife Service, the Wyoming and Idaho Fish and Game Departments, and the provinces of Alberta and British Columbia, should guarantee survival of the species and a compatible relationship between man and bears.

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